

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2005/003811

A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl⁷ C02F1/78, C01B13/10, C02F1/36, 1/46

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl⁷ C02F1/78, C01B13/10, C02F1/36, 1/46

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho	1922-1996	Jitsuyo Shinan Toroku Koho	1996-2005
Kokai Jitsuyo Shinan Koho	1971-2005	Toroku Jitsuyo Shinan Koho	1994-2005

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

JICST FILE (JOIS), WPI (DIALOG)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2003/22736 A1 (LEE, Hag-Joo), 20 March, 2003 (20.03.03), Claims & KR 2003/022733 A & EP 1436229 A1 & US 2004/245087 A1 & JP 2005-502456 A	1-9
X	JP 2002-307053 A (Daikin Industries, Ltd.), 22 October, 2002 (22.10.02), Claims; Par. No. [0026] (Family: none)	1-8, 10
X	JP 2001-252664 A (Kabushiki Kaisha Surugaen), 18 September, 2001 (18.09.01), Claims; Par. Nos. [0014], [0015] (Family: none)	1-8, 10

☒ Further documents are listed in the continuation of Box C.☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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"&" document member of the same patent family

Date of the actual completion of the international search

28 April, 2005 (28.04.05)

Date of mailing of the international search report

17 May, 2005 (17.05.05)

Name and mailing address of the ISA/
Japanese Patent Office

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Microfilm of the specification and drawings annexed to the request of Japanese Utility Model Application No. 9024/1984 (Laid-open No. 122337/1985) (Masuo YAMAMOTO), 17 August, 1985 (17.08.85), Claims; page 3, line 8 to page 4, line 16 (Family: none)	1-8, 10, 12
X	JP 2002-543960 A (CANZONE LTD.), 24 December, 2002 (24.12.02), Claims; Par. Nos. [0056], [0066] & WO 2000/67886 A & CA 2271170 A & AU 4388700 A & EP 1173271 A1 & US 6209855 B1	1, 2
Y	Mizuki GOTO et al., "Nanobubble no Hassei Tokusei ni Kansuru Kenkyu", Dai 40 Kai Nippon Dennetsu Symposium Koen Ronbunshu Vol. II, pages 359 to 360, 2003, full text	1, 2
Y	JP 2003-334548 A (National Institute of Advanced Industrial Science and Technology), 25 November, 2003 (25.11.03), Claims; table 4 (Family: none)	1-8, 10
Y	JP 10-251883 A (Kabushiki Kaisha VMC), 22 September, 1998 (22.09.98), Claims (Family: none)	1-8, 10
A	Jong-Yun Kim et al., Zeta Potential of Nanobubbles Generated by Ultrasonication in Aqueous Alkyl Polyglycoside Solutions, Journal of Colloid and Interface Science, 223, 2000, full text	1-8, 10
A	US 2003/0164306 A1 (Senkiw), 04 September, 2003 (04.09.03), Claims & WO 2003/72507 A1	1, 2